



ITEK CORPORATION - 10 MAGUIRE ROAD  
LEXINGTON 73 MASSACHUSETTS - VOLUNTEER 2-6200

16 October 1964

STATINTL



Dear Dick:

As a result of our recent meetings we are pleased to transmit our formal proposal for a study program concerning Cooperative Multi-Sensor Reconnaissance for Time Compression of the Intelligence Cycle.

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The work proposed is based on an informal study undertaken over the past year by an industrial team headed by Itek. Itek personnel have been concerned with the over-all systems concept and the [REDACTED] while [REDACTED] have been concerned

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The proposed system as presently conceived must be suitable for installation in the RA5C or TFX aircraft. The concept broadly stated is to achieve time compression by near real time identification of high priority data to permit priority processing of this data.

The purpose of this initial five months study effort is to undertake a functional analysis and recommend a preliminary system design. To achieve this goal close liaison with cognizant [REDACTED] personnel will be required, as well as close cooperation with the team members.

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The cost of the proposed program will be [REDACTED] effort over a period of five calendar months.

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A statement of work is attached. It is proposed that the work be undertaken more or less equally by the four companies. Itek anticipates awarding sub-contracts to [REDACTED] upon receipt of [REDACTED] contract.

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Exhibit A

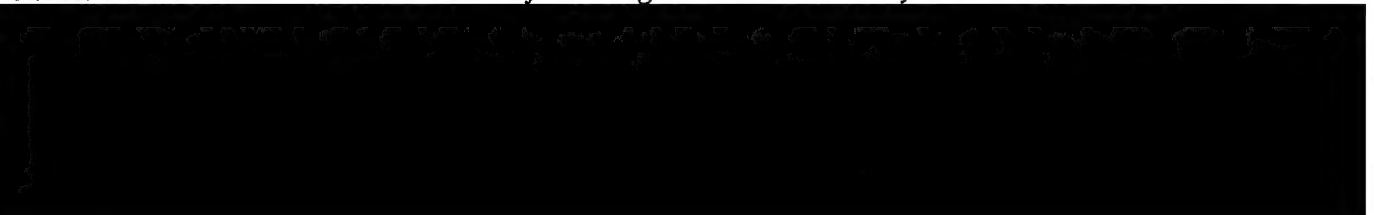
Summary of the Study and Study Plan

General

In many tactical situations a task force commander must react to new intelligence very quickly, i.e., in a matter of fractions of an hour after the data is collected. Present recon systems gather a vast amount of data and current intelligence processing techniques are inadequate to process the data collected quickly enough to meet many situations. The objective of this study is to evaluate various techniques for greatly compressing the time cycle between data collection and finished processing (reduction of data, interpretation, analysis, and preparation of an intelligence report).

System Concept

The high rate of data collection with present systems poses a difficult problem in time compression. Although certain efficiencies in data processing will save time, the most fruitful area to pursue is that of identifying in near real time the data which is most important from a timeliness viewpoint and processing that data first. High time priority targets have certain characteristics which can often be detected in real time by a single recon sensor, and even more often



Study Plan

The objective of the study is to recommend an advanced system suitable for installation in the RA5C or TFX with parallel IOIC improvements. The effort during the study program will be expended primarily in making a trade off analysis involving the following nine system functions:

1. Target pinpointing and threshold considerations
2. Ground coverage
3. Priority target correlation
4. Data transmission
5. Selection of data for immediate transmission
6. Observer functions
7. Display considerations - airborne/ground
8. Image conversion for transmission
9. Ground data processing

STATEMENT OF WORK

Item I

Furnish necessary scientific and engineering services to perform a study of system functions and system trade-offs leading to the design of an advanced multi-sensor system for tactical reconnaissance.

The work undertaken will be generally in accordance with Itek Proposal 3172 entitled "Cooperative Multi-Sensor Reconnaissance for Time Compression of the Intelligence Cycle" dated October 1, 1964. The objectives and study plan are summarized in the attached Exhibit A. The study program will culminate with the submission of a final report recommending a multi-sensor system and providing a preliminary reconnaissance system description suitable for installation in a RA5C or TFX type aircraft.

Item II

Furnish informal letter-type monthly progress reports.

Delivery: Item I: Final report five months from receipt of contract.

Item II: By the 10th day of each calendar month.

Government Furnished Technical Services:

To insure the optimum result from this program it is necessary that close liaison be maintained with cognizant [REDACTED] personnel. [REDACTED] will provide a permanent project team member to be available to participate in discussions analysis and evaluation, and to be the focal point for securing necessary technical and operations information required. This individual should be intimately familiar with the current operation and application of the RA5C and the IOIC.

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[REDACTED]

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The proposal is based on the award of a straight fixed price contract containing mutually agreeable terms and conditions. It is anticipated that subcontracts will be issued on a similar basis.

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[REDACTED]

Programs Manager

JDW:jy

Attachment